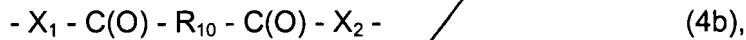
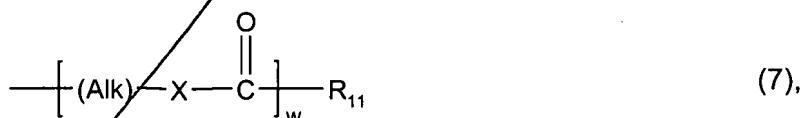


L<sub>2</sub> is a linking group of the above formula (4a), and L<sub>3</sub> is a linking group of the above formula (4c) or of the formula



wherein X<sub>1</sub> and X<sub>2</sub> are each independently of the other a group -O-, -S- or -NR<sub>0</sub>-, R<sub>0</sub> is hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl, and R<sub>10</sub> is linear or branched C<sub>1</sub>-C<sub>18</sub>-alkylene or unsubstituted or C<sub>1</sub>-C<sub>4</sub>-alkyl- or C<sub>1</sub>-C<sub>4</sub>-alkoxy-substituted C<sub>6</sub>-C<sub>10</sub>-arylene, C<sub>7</sub>-C<sub>18</sub>-aralkylene, C<sub>6</sub>-C<sub>10</sub>-arylene-C<sub>1</sub>-C<sub>2</sub>-alkylene-C<sub>6</sub>-C<sub>10</sub>-arylene, C<sub>3</sub>-C<sub>8</sub>-cycloalkylene, C<sub>3</sub>-C<sub>8</sub>-cycloalkylene-C<sub>1</sub>-C<sub>6</sub>-alkylene, C<sub>3</sub>-C<sub>8</sub>-cycloalkylene-C<sub>1</sub>-C<sub>2</sub>-alkylene-C<sub>3</sub>-C<sub>8</sub>-cycloalkylene or C<sub>1</sub>-C<sub>6</sub>-alkylene-C<sub>3</sub>-C<sub>8</sub>-cycloalkylene-C<sub>1</sub>-C<sub>6</sub>-alkylene,

*SUR  
B3  
OB*  
Q is a radical Q<sub>1</sub> of formula



wherein (Alk) is linear or branched C<sub>1</sub>-C<sub>12</sub>-alkylene, X is -O- or -NH-, R<sub>11</sub> is an olefinically unsaturated copolymerisable radical having from 2 to 24 carbon atoms which is unsubstituted or further substituted by C<sub>1</sub>-C<sub>4</sub>alkoxy, halogen, phenyl or carboxy, and w is the number 0 or 1, or Q is a polyoxyalkylene, poly(vinylpyrrolidone), poly(hydroxyethylacrylate), poly(hydroxyethylmethacrylate), polyacrylamide, poly(N,N-dimethylacrylamide), polyacrylic acid, polymethacrylic acid, polyacyl alkylene imine or a copolymeric mixture of two or more of the above-mentioned polymers which in each case comprises one or more ethylenically unsaturated bond and has a weight average molecular weight of  $\geq 100$ , and p<sub>1</sub> is an integer from 1 to 6, and q<sub>1</sub> is an integer from 1 to 8.

### Remarks

In response to the Office Action dated March 12, 2001, Applicants request reconsideration and withdrawal of the rejections set-forth in the Office Action in view of the above amendments and the following remarks.

### Specification

Applicants respectfully submit that the term (alk) and (alk') are different and relate to different formula. (alk) (page 1, line 25) relates to formula (1), whereas (alk') (page 3, line 2) relates to formula (2). As such, the Examiner's objection is respectfully traversed.

A

Applicants have amended the specification on page 9 and page 37 to correct the informalities pointed out by the Examiner.

*Claim objections*

The Examiner stated in the office action that claim 4 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicants disagree with the Examiner's assertion. Claim 4 was constructed to further limit A in formula (1) of claim 1 to a polysiloxane segment having formula (2). As stated above, the term (alk) and (alk') are different and relate respectively to formula (1) and to formula (2). As such, the Examiner's objection is respectfully traversed.

Claims 7 and 10 have been amended to overcome the Examiner's claim objections set forth in the office action.

*Claim rejections – 35 U.S.C. § 112*

Applicants thank the Examiner for drawing their attention to claims 7 and 9-11. Applicants have amended the claims consistent with the Examiner's rejections. As such, the Examiner's rejections are respectfully traversed.

*Claim Rejections – 35 U.S.C. § 102*

The Examiner has rejected claims 1-8 and 12 under 35 U.S.C. 102(e) as being anticipated by Meijis (US 5,981,615). Applicants submit that the above amendment to claim 1 establishes novelty over Meijis (US 5,981,615) and the 35 U.S.C. 102(e) rejection has been overcome.

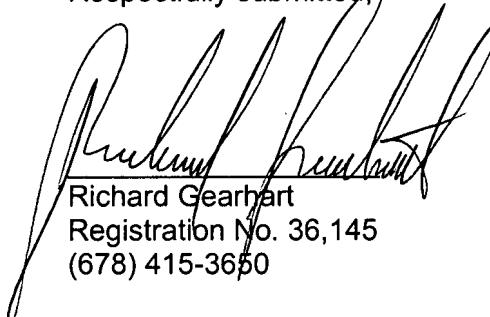
Applicants request reconsideration and withdrawal of the rejections set-forth in the Office Action and allowance of claims 1-12. Should the Examiner believe that a discussion with Applicants' representative would further the prosecution of this application, the Examiner is respectfully invited to contact the undersigned.

Please address all correspondence to Thomas Hoxie, Novartis Corporation, Patent & Trademark Department, 564 Morris Ave., Summit, NJ 0790-1027. The Commissioner is hereby

authorized to charge any other fees which may be required under 37 C.F.R. §§1.16 and 1.17, or credit any overpayment, to Deposit Account No. 19-0134.

Respectfully submitted,

Date: 6/8/01

  
Richard Gearhart  
Registration No. 36,145  
(678) 415-3650

Novartis Corporation  
Patent & Trademark Department  
564 Morris Ave.  
Summit, NJ 07901-1027

**CERTIFICATE OF MAILING**

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Assistant Commissioner for Patents, Washington, D.C. 20231.

Jennifer China  
Type or print name

Jennifer China  
Signature

June 8 2001  
Date

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF Hirt, et al

Art Unit: 1712

Examiner: Kuo-Liang Peng

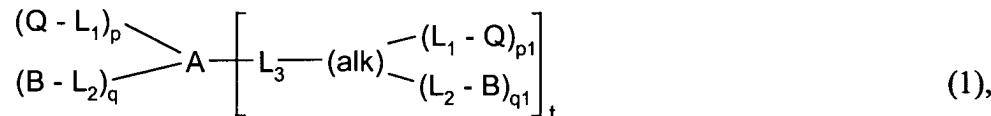
APPLICATION NO: 09/525,158

FILED: March 14, 2000

FOR: Organic Compounds

**Marked-Up Version of Claim Amendments**

1. (once amended) An amphiphilic block copolymer of formula



wherein A is a hydrophobic polysiloxane or perfluoroalkyl polyether segment;

B is a surface-modifying hydrophilic segment having a weight average molecular weight of  $\geq 100$  that is devoid of a crosslinkable group;

Q is a moiety comprising at least one crosslinkable ethylenically unsaturated group;

(alk) is C<sub>2</sub>-C<sub>20</sub>-alkylene which is unsubstituted or substituted by hydroxy;

L<sub>1</sub>, L<sub>2</sub> and L<sub>3</sub> are each independently of the other a linking group;

p and q are each independently of the other an integer from 1 to 12; and either

t is 0 and p and q are each independently of the other an integer from [1]2 to [25]20; or

t is an integer from 1 to 8 and p and q are each 0.

7. (once amended) An amphiphilic block copolymer according to claim 1, wherein B is a non-ionic segment selected from the group consisting of a polyoxyalkylene, polysaccharide, polypeptide, poly(vinylpyrrolidone), polyalkylacrylate,

A

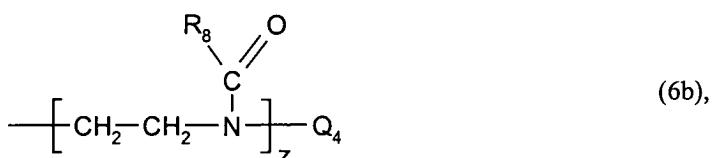
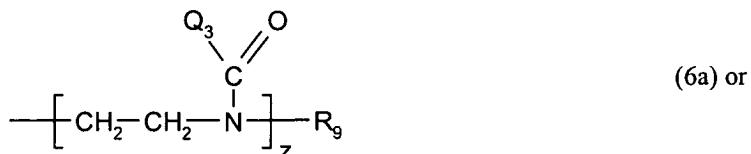
polymethacrylate[ or -methacrylate], polyhydroxyalkylacrylate,  
polyhydroxymethacrylate[ or -methacrylate], polyacyl alkylene imine, polyacryl amide,  
polyvinyl alcohol, polyvinyl ether and a polyol, or B is a polyionic segment selected from  
the group consisting of a polyallylammonium, polyethyleneimine,  
polyvinylbenzyltrimethylammonium, polyaniline, sulfonated polyaniline, polypyrrole[  
and polypyridinium segment], polypyridine, [and a ]polyacrylic acid, [and  
]polymethacrylic acid, a polythiophene-acetic acid, a polystyrenesulfonic acid and a  
zwitterionic segment, or a [suitable ]salt thereof.

9. (once amended) An amphiphilic block copolymer according to claim 1, wherein Q is a polyoxyalkylene, poly(vinylpyrrolidone), poly(hydroxyethylacrylate), poly(hydroxyethylmethacrylate), polyacrylamide, poly(N,N-dimethylacrylamide), polyacrylic acid, polymethacrylic acid, polyacyl alkylene imine or a copolymeric mixture of two or more of the above-mentioned polymers which in each case comprises one or more ethylenically unsaturated bond and has a weight average molecular weight of, for example,  $\geq 100$ .

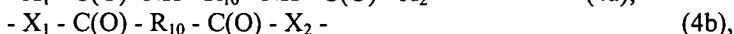
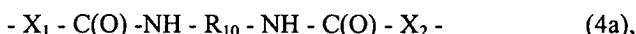
10. (once amended) An amphiphilic block copolymer according to claim 9, wherein Q is a hydrophilic segment of formula



(5a)



wherein  $\text{L}_1'$  is a bivalent linking group of formula

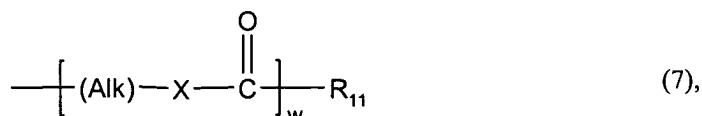


wherein  $\text{X}_1$  and  $\text{X}_2$  are each independently of the other a group  $-\text{O}-$ ,  $-\text{S}-$  or  $-\text{NR}_0-$ ,  $\text{R}_0$  is

A

hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl, and R<sub>10</sub> is linear or branched C<sub>1</sub>-C<sub>18</sub>-alkylene or unsubstituted or C<sub>1</sub>-C<sub>4</sub>-alkyl- or C<sub>1</sub>-C<sub>4</sub>-alkoxy-substituted C<sub>6</sub>-C<sub>10</sub>-arylene, C<sub>7</sub>-C<sub>18</sub>-aralkylene, C<sub>6</sub>-C<sub>10</sub>-arylene-C<sub>1</sub>-C<sub>2</sub>-alkylene-C<sub>6</sub>-C<sub>10</sub>-arylene, C<sub>3</sub>-C<sub>8</sub>-cycloalkylene, C<sub>3</sub>-C<sub>8</sub>-cycloalkylene-C<sub>1</sub>-C<sub>6</sub>-alkylene, C<sub>3</sub>-C<sub>8</sub>-cycloalkylene-C<sub>1</sub>-C<sub>2</sub>-alkylene-C<sub>3</sub>-C<sub>8</sub>-cycloalkylene or C<sub>1</sub>-C<sub>6</sub>-alkylene-C<sub>3</sub>-C<sub>8</sub>-cycloalkylene-C<sub>1</sub>-C<sub>6</sub>-alkylene,

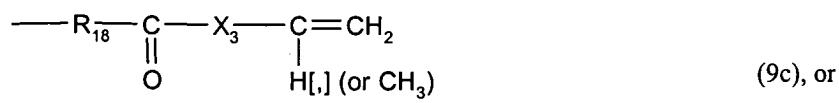
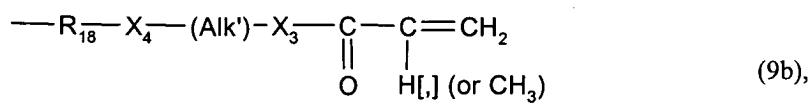
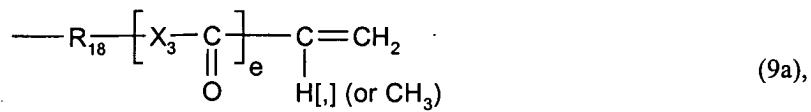
Q<sub>2</sub> is a radical of formula



wherein (Alk) is linear or branched C<sub>1</sub>-C<sub>12</sub>-alkylene, X is -O- or -NH-, R<sub>11</sub> is an olefinically unsaturated copolymerisable radical having from 2 to 24 carbon atoms which is unsubstituted or further substituted by C<sub>1</sub>-C<sub>4</sub>alkoxy, halogen, phenyl or carboxy, and w is the number 0 or 1,

Q<sub>3</sub> is C<sub>3</sub>-C<sub>12</sub>-alkenyl or a radical -(CH<sub>2</sub>)<sub>1-4</sub>-O-R<sub>16</sub> wherein R<sub>16</sub> is acryloyl, methacryloyl or a group -C(O)-NH-(CH<sub>2</sub>)<sub>2-4</sub>-O-C(O)-C(R<sub>17</sub>)=CH<sub>2</sub> and R<sub>17</sub> is hydrogen or methyl,

Q<sub>4</sub> is a radical of formula



wherein X<sub>3</sub> is -O- or [-NR]-NR-, R is hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl, X<sub>4</sub> is a group -C(O)-O-, -O-C(O)-NH- or -NH-C(O)-O-, (Alk') is C<sub>1</sub>-C<sub>8</sub>-alkylene, e is an integer of 0 or 1, and R<sub>18</sub> is C<sub>1</sub>-C<sub>12</sub>-alkylene, phenylene or C<sub>7</sub>-C<sub>12</sub>-phenylenealkylene,  
one of the radicals R<sub>6</sub> and R<sub>7</sub> is hydrogen and the other is methyl,

(alk'') is C<sub>1</sub>-C<sub>6</sub>-alkylene, c is the number 0 or 1, and each of a and b independently of the other is a number from 0 to 100, the sum of (a+b) being from 2 to 100,

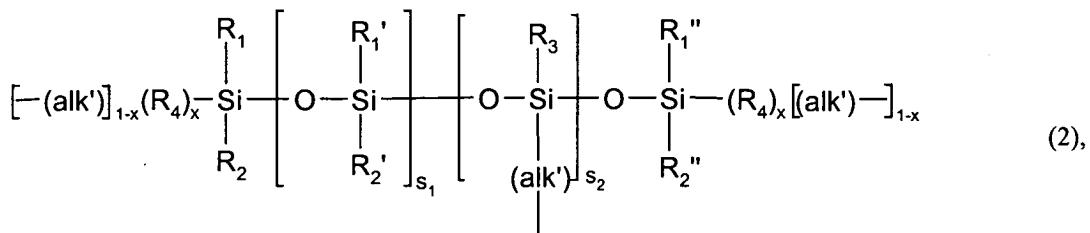
R<sub>8</sub> is hydrogen; C<sub>1</sub>-C<sub>12</sub>-alkyl unsubstituted or substituted by hydroxy or fluoro and/or uninterrupted or interrupted by oxygen; C<sub>5</sub>-C<sub>8</sub>-cycloalkyl; phenyl; or benzyl,

R<sub>9</sub> is C<sub>1</sub>-C<sub>12</sub>-alkyl, benzyl, C<sub>2</sub>-C<sub>4</sub>-alkanoyl, benzoyl or phenyl, and

z is an integer from 2 to 150.

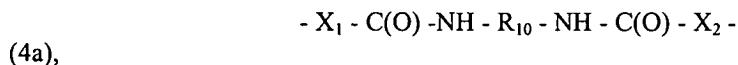
11. (once amended) An amphiphilic block copolymer according to claim 2 of formula (1a), wherein

A is a polysiloxane segment of formula



wherein x and s<sub>2</sub> are each 0, and R<sub>1</sub>, R<sub>1</sub>', R<sub>1</sub>'', R<sub>2</sub>, R<sub>2</sub>', R<sub>2</sub>'', R<sub>3</sub> and R<sub>4</sub> are each independently of one another C<sub>1</sub>-C<sub>4</sub>-alkyl, B is a polyoxyalkylene, poly(vinylpyrrolidone), poly(hydroxyethylacrylate), poly(hydroxyethylmethacrylate), polyacrylamide, poly(N,N-dimethylacrylamide), polyacrylic acid, polymethacrylic acid, polyacyl alkylene imine or a copolymeric mixture of two or more of the above-mentioned polymers,

L<sub>1</sub> is a linking group of formula



L<sub>2</sub> is a linking group of the above formula (4a), and L<sub>3</sub> is a linking group of the above formula (4c) or of the formula

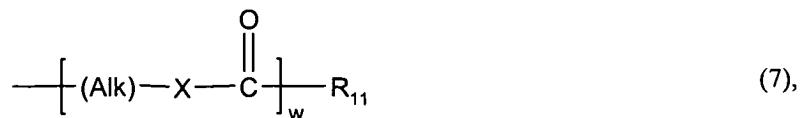


wherein X<sub>1</sub> and X<sub>2</sub> are each independently of the other a group -O-, -S- or -NR<sub>0</sub>-, R<sub>0</sub> is hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl, and R<sub>10</sub> is linear or branched C<sub>1</sub>-C<sub>18</sub>-alkylene or unsubstituted or C<sub>1</sub>-C<sub>4</sub>-alkyl- or C<sub>1</sub>-C<sub>4</sub>-alkoxy-substituted C<sub>6</sub>-C<sub>10</sub>-arylene, C<sub>7</sub>-C<sub>18</sub>-aralkylene, C<sub>6</sub>-C<sub>10</sub>-arylene-C<sub>1</sub>-C<sub>2</sub>-alkylene-C<sub>6</sub>-C<sub>10</sub>-arylene, C<sub>3</sub>-C<sub>8</sub>-cycloalkylene, C<sub>3</sub>-C<sub>8</sub>-cycloalkylene-C<sub>1</sub>-

A

C<sub>6</sub>-alkylene, C<sub>3</sub>-C<sub>8</sub>-cycloalkylene-C<sub>1</sub>-C<sub>2</sub>-alkylene-C<sub>3</sub>-C<sub>8</sub>-cycloalkylene or C<sub>1</sub>-C<sub>6</sub>-alkylene-C<sub>3</sub>-C<sub>8</sub>-cycloalkylene-C<sub>1</sub>-C<sub>6</sub>-alkylene,

Q is a radical Q<sub>1</sub> of formula



wherein (Alk) is linear or branched C<sub>1</sub>-C<sub>12</sub>-alkylene, X is -O- or -NH-, R<sub>11</sub> is an olefinically unsaturated copolymerisable radical having from 2 to 24 carbon atoms which is unsubstituted or further substituted by C<sub>1</sub>-C<sub>4</sub>alkoxy, halogen, phenyl or carboxy, and w is the number 0 or 1, or Q is a polyoxyalkylene, poly(vinylpyrrolidone), poly(hydroxyethylacrylate), poly(hydroxyethylmethacrylate), polyacrylamide, poly(N,N-dimethylacrylamide), polyacrylic acid, polymethacrylic acid, polyacyl alkylene imine or a copolymeric mixture of two or more of the above-mentioned polymers which in each case comprises one or more ethylenically unsaturated bond and has a weight average molecular weight of, for example, ] ≥ 100, and p<sub>1</sub> is an integer from 1 to 6, and q<sub>1</sub> is an integer from 1 to 8.



## Office Action Summary

Application No.	09/525,158	
Examiner	HIRT ET AL.	
Kuo-Liang Peng	Art Unit 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) Responsive to communication(s) filed on 9/6/00 Information Disclosure Statement.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 13-17 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1 and 4-11 is/are rejected.
- 7) Claim(s) 2,3 and 12 is/are objected to.
- 8) Claims 1-17 are subject to restriction and/or election requirement.

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### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved.
- 12) The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. § 119

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

### Attachment(s)

- 15) Notice of References Cited (PTO-892)
- 16) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 18) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 19) Notice of Informal Patent Application (PTO-152)
- 20) Other: \_\_\_\_\_